

AMENDMENTS TO THE CLAIMS

Please amend claim 10 as follows:

1. (Cancelled)
2. (Previously presented) The aircraft of claim 9, further comprising: a wing extending outwardly from the fuselage; and
an electrothermal wing ice protection system configured to at least reduce the formation of ice on a portion of the wing in the absence of bleed air from the jet engine, the electrothermal wing ice protection system configured to receive electric power from the electric generator.
3. (Previously presented) The aircraft of claim 9, further comprising:
a wing extending outwardly from the fuselage; and
an electromechanical wing ice protection system configured to at least reduce the formation of ice on a portion of the wing in the absence of bleed air from the jet engine, the electromechanical wing ice protection system configured to receive electric power from the electric generator.
4. (Previously presented) The aircraft of claim 9, further comprising:
a wing extending outwardly from the fuselage; and
a wing ice protection system configured to at least reduce the formation of ice on a portion of the wing in the absence of bleed air from the jet engine, the wing ice protection system configured to receive electric power from the electric generator in a cycled manner.
5. (Previously presented) The aircraft of claim 9, further comprising:
a hydraulically actuated landing gear extendable downwardly from the aircraft;
a hydraulic pump configured to provide hydraulic power to the landing gear; and

an electric motor operably coupled to the hydraulic pump and configured to receive electric power from the electric generator to drive the hydraulic pump in the absence of pneumatic power from the jet engine.

6. (Previously presented) The aircraft of claim 9 wherein the electric generator is a starter/generator operable as a synchronous motor to start the jet engine in the absence of pneumatic power.

7. (Previously presented) The aircraft of claim 9 wherein the electric generator is a starter/generator operable as a synchronous motor to start the jet engine, and wherein the jet engine is configured to be started by the starter/generator in the absence of a pneumatically operable starter turbine.

8. (Previously presented) The aircraft of claim 9 wherein the electric generator operably coupled to the jet engine is a first electric generator, and wherein the aircraft further comprises:

an auxiliary power unit; and

a second electric generator operably coupled to the auxiliary power unit and configured to receive shaft power from the auxiliary power unit, wherein the at least one compressor motor of the environmental control system is configured to receive electric power from the second electric generator to provide outside air to the passenger cabin in the absence of compressed air from the auxiliary power unit.

9. (Previously presented) An aircraft comprising:

a fuselage having a passenger cabin;

a jet engine configured to provide propulsive thrust to the aircraft;

an electric generator operably coupled to the jet engine and configured to receive shaft power from the jet engine; and

an environmental control system including at least one compressor motor configured to receive electric power from the electric generator to provide outside air to the passenger cabin in the absence of bleed air from the jet engine, wherein the compressor motor is an adjustable speed motor configured to vary compressor speed in response to changes in pressurization demands of the fuselage.

10. (Currently amended) An aircraft comprising:

a fuselage having a passenger cabin;

a jet engine configured to provide propulsive thrust to the aircraft;

an electric generator operably coupled to the jet engine and to receive shaft power from the jet engine;

an environmental control system including at least one compressor motor that receives electric power from the electric generator to provide outside air to the passenger cabin in the absence of bleed air from the jet engine;

a fuel tank; and

a variable-speed fuel pump that transfers fuel from the fuel tank to the jet engine at variable speeds based on the demand for fuel by the jet engine, wherein the fuel pump receives electric power from the electric generator.

11. (Previously presented) An aircraft comprising:

a fuselage having a passenger cabin;

a jet engine configured to provide propulsive thrust to the aircraft;

an electric generator operably coupled to the jet engine and configured to receive shaft power from the jet engine;

an environmental control system including at least one compressor motor configured to receive electric power from the electric generator to provide outside air to the passenger cabin in the absence of bleed air from the jet engine, wherein the environmental control system further comprises at least

one variable speed fan configured to flow air to the passenger cabin at a plurality of flow rates in response to changes in at least one of flow rate and pressurization demands of the fuselage.

12. (Cancelled)

13. (Previously presented) An aircraft comprising:

a fuselage;

a wing extending outwardly from the fuselage;

a jet engine configured to provide propulsive thrust to the aircraft;

a first electric generator operably coupled to the jet engine and configured to receive shaft power from the engine;

an environmental control system configured to provide conditioned air to at least a portion of the fuselage in the absence of bleed air from the jet engine, the environmental control system including at least one fan motor configured to receive electric power from the first electric generator;

a wing ice protection system configured to at least reduce the formation of ice on a portion of the wing, the wing ice protection system configured to receive electric power from the first electric generator in the absence of bleed air from the jet engine;

an auxiliary power unit; and

a second electric generator operably coupled to the auxiliary power unit and configured to receive shaft power from the auxiliary power unit, wherein the wing ice protection system is configured to receive electric power from the second electric generator in the absence of compressed air from the auxiliary power unit.

14. (Previously presented) An aircraft comprising:

a fuselage;

- a wing extending outwardly from the fuselage;
- a jet engine configured to provide propulsive thrust to the aircraft;
- an electric generator operably coupled to the jet engine and configured to receive shaft power from the engine;
- an environmental control system configured to provide conditioned air to at least a portion of the fuselage in the absence of bleed air from the jet engine, the environmental control system including at least one fan motor configured to receive electric power from the electric generator; and
- a wing ice protection system configured to at least reduce the formation of ice on a portion of the wing, the wing ice protection system configured to receive electric power from the electric generator in the absence of bleed air from the jet engine, wherein the wing ice protection system is an electrothermal system including at least one heating element positioned at least proximate to an interior portion of the wing, and wherein the heating element can be energized with electric power from the electric generator to warm the portion of the wing to at least reduce the formation of ice on the portion of the wing.

15. (Previously presented) An aircraft comprising:

- a fuselage;
- a wing extending outwardly from the fuselage;
- a jet engine configured to provide propulsive thrust to the aircraft;
- an electric generator operably coupled to the jet engine and configured to receive shaft power from the engine;
- an environmental control system configured to provide conditioned air to at least a portion of the fuselage in the absence of bleed air from the jet engine, the environmental control system including at least one fan motor configured to receive electric power from the electric generator; and
- a wing ice protection system configured to at least reduce the formation of ice on a portion of the wing, the wing ice protection system configured to receive

electric power from the electric generator in the absence of bleed air from the jet engine, wherein the wing ice protection system is an electromechanical system including at least one mechanical actuator positioned at least proximate to an interior portion of the wing, and wherein the actuator can be activated with electric power from the electric generator to vibrate the portion of the wing to at least reduce the formation of ice on the portion of the wing.

16. (Previously presented) The aircraft of claim 14, further comprising a hydraulically actuated landing gear system configured to movably support at least a portion of the aircraft on the ground, the landing gear system including a hydraulic pump driven by an electric motor in the absence of bleed air from the jet engine, wherein the electric motor is configured to receive electric power from the electric generator.

17. (Previously presented) The aircraft of claim 14 wherein the aircraft is a commercial passenger carrier and the fuselage includes a passenger cabin and a cargo hold.

18. (Cancelled)

19-23. (Cancelled)

24. (Previously presented) An aircraft comprising:
a wing;
a jet engine configured to provide propulsive thrust to the aircraft;
a first electric generator operably coupled to the jet engine and configured to receive shaft power from the engine;
a wing ice protection system configured to at least reduce the formation of ice on a portion of the wing, the wing ice protection system configured to receive

electric power from the first electric generator in the absence of bleed air from the jet engine;

a hydraulically actuated landing gear system configured to movably support at least a portion of the aircraft on the ground, the landing gear system including a hydraulic pump driven by an electric motor in the absence of bleed air from the jet engine, wherein the electric motor is configured to receive electric power from the electric generator;

an auxiliary power unit; and

a second electric generator operably coupled to the auxiliary power unit and configured to receive shaft power from the auxiliary power unit, wherein the wing ice protection system is configured to receive electric power from the second electric generator in the absence of compressed air from the auxiliary power unit.

25. (Previously presented) An aircraft comprising:

a wing;

a jet engine configured to provide propulsive thrust to the aircraft;

an electric generator operably coupled to the jet engine and configured to receive shaft power from the engine;

a wing ice protection system configured to at least reduce the formation of ice on a portion of the wing, the wing ice protection system configured to receive electric power from the electric generator in the absence of bleed air from the jet engine, wherein the wing ice protection system is an electrothermal system including at least one heating element positioned at least proximate to an interior portion of the wing, and wherein the heating element can be energized with electric power from the electric generator to warm the portion of the wing to at least reduce the formation of ice on the portion of the wing;

and

a hydraulically actuated landing gear system configured to movably support at least a portion of the aircraft on the ground, the landing gear system including a hydraulic pump driven by an electric motor in the absence of bleed air from the jet engine, wherein the electric motor is configured to receive electric power from the electric generator.

26. (Previously presented) An aircraft comprising:

a wing;

a jet engine configured to provide propulsive thrust to the aircraft;

an electric generator operably coupled to the jet engine and configured to receive shaft power from the engine;

a wing ice protection system configured to at least reduce the formation of ice on a portion of the wing, the wing ice protection system configured to receive electric power from the electric generator in the absence of bleed air from the jet engine, wherein the wing ice protection system is an electromechanical system including at least one mechanical actuator positioned at least proximate to an interior portion of the wing, and wherein the actuator can be activated with electric power from the electric generator to vibrate the portion of the wing to at least reduce the formation of ice on the portion of the wing;
and

a hydraulically actuated landing gear system configured to movably support at least a portion of the aircraft on the ground, the landing gear system including a hydraulic pump driven by an electric motor in the absence of bleed air from the jet engine, wherein the electric motor is configured to receive electric power from the electric generator.

27-36. (Cancelled)

37. (Previously presented) An aircraft comprising:

a fuselage having a passenger cabin;

a jet engine configured to provide propulsive thrust to the aircraft;

an electric generator operably coupled to the jet engine and configured to receive shaft power from the jet engine; and

an environmental control system including at least one compressor motor configured to receive electric power from the electric generator to provide outside air to the passenger cabin, wherein the compressor motor of the environmental control system is an adjustable speed motor configured to vary compressor speed in response to changes in pressurization demands of the fuselage.

38. (Previously presented) The aircraft of claim 37, further comprising:

a wing extending outwardly from the fuselage; and

a wing ice protection system configured to at least reduce the formation of ice on a portion of the wing, the wing ice protection system configured to receive electric power from the electric generator.

39. (Previously presented) The aircraft of claim 37, further comprising:

a hydraulically actuated landing gear extendable downwardly from the aircraft;

a hydraulic pump configured to provide hydraulic power to the landing gear; and

an electric motor operably coupled to the hydraulic pump and configured to receive electric power from the electric generator to drive the hydraulic pump.